STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



GENERAL PERMIT for SEWER EXTENSION CONSTRUCTION

The Missouri Department of Natural Resources hereby issues a permit to:

Construction Permit ID:	MOGC00883
Title of Project:	Kirkwood Estates
Owner:	Kirk Property Holdings LLC
Address:	7295 W Farm Rd 170
	Republic, MO 65738

The project will also include general site work appropriate to the scope and purpose of the project and will include all the necessary appurtenances to make a complete and usable collection system. The construction of this project will be in the vicinity of the county below and discharge to Receiving Permit ID below:

County: Greene Receiving Permit ID: MO0022098

for the construction of (described construction project):

Kirkwood Estates-Construction of approximately 2,000 lf of 8-inch PVC SDR-35 and 1,134 lf of 8-inch PVC SDR-26 gravity sewer lines with approximately 20 manholes to serve a 407 PE and a design average flow of 40,660 gpd.

This project utilizes City of Republic standard specifications approved on October 6, 2023.

Project is in the vicinity of Farm Road 170 and E Peaceful Street in City of Republic, Greene County and discharges to an existing system to be treated at Republic WWTF, MO-0022098. Angel C. Falig Jr., City Engineer, with City of Republic provided an acceptance letter dated April 24, 2025.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department) As the Department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

<u>May 06, 2025</u> Issue Date

John Hoke, Director Water Protection Program

May 05, 2027 Expiration Date

APPLICABILITY

- 1. This permit authorizes the construction of gravity sewer extensions, force mains, and lift stations. Non-earthen flow equalization storage basins at lift stations and inline storage, which flows back into the lift station or collection system, are also included.
- 2. The Missouri Department of Natural Resources may require a site-specific sewer extension construction permit due to compliance and enforcement actions in accordance with 10 CSR 20-6.010(13)(C).
- 3. This permit does not apply to:
 - A. Earthen storage basins;
 - B. Exempt projects in accordance with 10 CSR 20-6.010(1)(B), 10 CSR 20-6.010(5)(B), and RSMo 644.051 unless requested by the applicant or required by enforcement.

PREREQUISITES:

- 1. The Sewer Extension Construction Permit application, appropriate fee, and documentation in accordance with 10 CSR 20-6.010(5)(G).
- 2. Submit the Sewer Extension Construction Permit application at least sixty (60) days in advance of the start of construction in accordance with 10 CSR 20-6.010(5)(F).
- 3. Submit an electronic copy of the construction permit application and documents to <u>DNR.WPPEngineerSection@dnr.mo.gov</u> in accordance with 10 CSR 20-6.010(5)(G)3.
- 4. The plans and specifications, each signed, sealed, and dated by a professional engineer registered in the State of Missouri in accordance with 10 CSR 20-8 and 10 CSR 20-6.010.
- 5. The Design Certification form, Engineering Report, or Summary of Design, signed, sealed, and dated by a professional engineer registered in the State of Missouri, certifying the design of the system is in accordance with 10 CSR 20-6 and 10 CSR 20-8.
- 6. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting the wastewater for treatment and indicating the permitted treatment facility has the available capacity.
- 7. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting responsibility for the operation and maintenance of these facilities.

PERMIT CONDITIONS:

- 1. This permit authorizes the activities and scope of work detailed in the plans and specifications submitted with the request.
- 2. The construction must be in accordance with the final plans and specifications received by the Department. Revisions that affect capacity, flow, or system layout must be approved by the Department prior to construction.

PERMIT CONDITIONS: (continued)

- 3. If construction will incorporate minor changes from previously submitted plans and specifications (i.e., changes that do not affect the capacity, flow, or system layout), submit an electronic copy of the as-built plans and specifications in accordance with 10 CSR 20-8.110(11).
- 4. State and Federal Law does not permit bypassing of raw wastewater; therefore, the applicant must take steps to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's regional office per 10 CSR 20-7.015(9)(E) or through the Online Bypass/SSO Reporting service on the Missouri Gateway for Environmental Management (MoGEM) portal found at https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem.

See <u>https://dnr.mo.gov/document-search/missouri-gateway-environmental-management-mogem-frequently-asked-questions-pub2988/pub2988</u> for more information.

- 5. Protection of drinking water supplies must meet the requirements of 10 CSR 20-8.120(5).
 - A. There shall be no physical connections between a public or private potable water supply system and a sewer or appurtenance that would permit the passage of any wastewater or polluted water into the potable supply.
 - B. Lay sewers at least 50 feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.
- 6. Position manholes so that the top access is at or above grade level.
- 7. In addition to the requirements for a construction permit, see 10 CSR 20-6.200 for land disturbance requirements to obtain a Missouri State Operating Permit to discharge stormwater. The permit requires Best Management Practices sufficient to control runoff and sedimentation to protect waters of the state. Applicants shall obtain land disturbance permits through the Department's ePermitting system, available online at https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting.

See <u>https://dnr.mo.gov/water/business-industry-other-entities/permits-</u> <u>certification-engineering-fees/stormwater/construction-land-disturbance</u> for more information.

8. Entities applying for funding under 10 CSR 20-4, "Grants and Loans" will need to comply with those requirements in addition to the requirements of 10 CSR 20-8.

PERMIT CONDITIONS: (continued)

9. The Department may require a United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) or a permit waiver for the activities described in this permit. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S., then a 404/401 is required. Fulfillment of these requirements is necessary before the permit is considered valid. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Operating Permits Section at 573-522-4502 for more information.

See <u>https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality</u> for more information.

- 10. If this project eliminates a wastewater treatment facility under the jurisdiction of the Department, then the applicant shall submit a full closure plan with a Facility Closure Request Form, <u>Form MO 780-2512</u>, to the Department's appropriate <u>regional office</u> for review and approval. In accordance with 10 CSR 20-6.010(12), the closure plan must meet the requirements outlined in Standard Conditions Part III of the Missouri State Operating Permit. Closure shall not commence until the Department approves the submitted closure plan.
- 11. If this project is part of a project to resolve an enforcement action or is receiving funding from the Department, submit a <u>statement of work complete</u> following the completion of construction.
- 12. Applicants may submit, prior to the expiration date of this permit, a written request that additional time is needed in accordance with 10 CSR 20-6.010(5)(H)3.

MISSOURI DEPARTMENT OF		RESOURCES		FOR DEPART	TMENT USE ONLY			
				APP NO.	CP NO.			
				FEE RECEIVED	CHECK NO.			
	DATE RECEIVED							
NOTE ► PLEASE READ THE ACCOMPAN	YING INS	TRUCTIONS BEFORE	COMPLETIN	G THIS FORM				
1.0 APPLICATION INFORMATION (Note -	If any of th	ne questions in this sect	ion are answ	ered NO, this applic	ation may be			
considered incomplete and returned.)								
1.1 Is this a Federal/State funded project?	☐ YES	☑ N/A Funding Age	-		oject #:			
1.2 Has the Department of Natural Resource	es approve ☑ NO	ed the proposed project's	s engineering	report*?				
1.3 Is a copy of the appropriate plans* and s	pecificatio	ns* included with this ap	plication?	🗹 YES 🗌 NO				
1.4 Is a summary of design* included with th	is applicat	ion? 🗹 YES 🗌 NO	C					
1.5 Is the appropriate fee or JetPay confirma See Section 7.0	ation includ	ded with this application?	? 🗹 YES	□ NO				
* Must be affixed with a Missouri registered p	rofessiona	al engineer's seal, signat	ture and date					
2.0 PROJECT INFORMATION 2.1 NAME OF PROJECT								
Kirkwood Estates								
ADDRESS	CITY		STATE	ZIP CODE	COUNTY			
Farm Rd 170 & E Peaceful St	Republic		МО	65706	Greene			
2.2 Legal Description: ¹ / ₄ , NE	¼, NW	¼, Sec. ₁₅ , T	28N , R 2	3W				
2.3 Project Components (check all that apply ☐ Gravity sewers □ Pumping station		orce mains 🗌 Alterna	tive sewer sy	stem 🔲 Other (D	Describe below.)			
2.4 PROJECT DESCRIPTION								
3 new sewer main extensions which tie into the Line A consists of adding a 1280 linear foot 8 Line C consists of adding a 610 linear foot 8" Line D consists of adding a 1320 linear foot 8	" sewer ma sewer ma	ain extensions to serve in extensions to serve 0	commercial l	lots 12 single family	residential lots.			
2.5 DESIGN INFORMATION A. Population or number of lots to be served	by this ex	tension: 214						
B. Estimated flow to be contributed by this e	xtension:	Design Average Flow: 4	40660 gpd	Design Peak Hourly	y Flow: 7,233 gph			
C. Industrial Wastes: Type: n/a	Flo	w: _{n/a} gpd						
D. Receiving Sewer: Size: 8 inches		acity:537 gpm						
3.0 PROJECT OWNER								
NAME		TELEPHONE NUMBER WITH AF	REA CODE	EMAIL ADDRESS				
Kirk Property Holdings LLC		(417) 849-2402	07475	kyle@kirkscollsionce	enter.com			
ADDRESS 7295 W Farm Rd 170	сіту Republic		STATE MO	ZIP CODE 65738				
4.0 CONTINUING AUTHORITY: A continuing	a authority	is a company, business	s, entity or pe	rson(s) that will be o	operating the facility			
or ensuring compliance with the permit requi								
contractually hired by the permittee to sample								
operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf. A continuing authority's name must be listed exactly as								
it appears on the Missouri Secretary of State's (SoS's) webpage:								
https://bsd.sos.mo.gov/BusinessEntity/BESea government, or otherwise not required to regi		he SoS.			ividual(s),			
NAME City of Republic		TELEPHONE NUMBER WITH AF (417) 732-3405	REA CODE	EMAIL ADDRESS	0.com			
ADDRESS	CITY	···· / · · · · · · · · · · · · · · · ·	STATE	ZIP CODE				
204 N Main St	Republic		МО	65738				
4.1 A letter from the continuing authority or the first of the owner, is included with the owner, is included with the owner.			ving Wastew	ater Treatment Faci	lity Acceptance form,			
MO 780-1632 (10-19)	o applicat				Page 1 of 2			

5.0 ENGINEER		and the second			
ENGINEER NAME / COMPANY NAME		TELEPHONE NUMBER WITH AREA CODE		EMAIL ADDRESS	
Jared Davis / OWN, Inc		(417) 866-2741		jmdavis@weareown.com	
ADDRESS CITY		-	STATE	ZIP CODE	
3213 S. West Bypass	Springfie	ld	MO	65807	
6.0 RECEIVING WASTEWATER TREA	TMENT FACIL	ITY			
NAME		TELEPHONE NUMBER WITH	TELEPHONE NUMBER WITH AREA CODE EMAIL ADDRESS		
City of Republic Wastewater Treatment I	Plant				
MISSOURI STATE OPERATING PERMIT #		REMAINING CAPACITY (GPD)	••••••	
MO-0022098		1,540,000 GPD			
6.1 Has the receiving treatment facility a	agreed to acce	pt the additional waste	water flow?	VES NO	
6.2 A letter from the receiving wastewat ☐ YES ☐ NO ☑ N/A	er treatment fa	cility, if different than t	he continuing	g authority, is included with this application.	
7.0 Application Fee					
Check Number		ZJe	etPay Confirm	nation Number	
supervision in accordance with a system submitted. Based on my inquiry of the p gathering the information, the informatio aware that there are significant penalties knowing violations.	erson or perso n submitted is,	ns who menage the sy to the best of my know	stem, or thos wedge and b	se persons directly responsible for elief, true, accurate, and complete. I am	
PROJECT OWNER SIGNATURE					
PRINTED NAME Kyle Kirk				4-16-2025	
TITLE OR COPORATE POSITION		TELEPHONE NUMBER WITH	AREA CODE	EMAIL ADDRESS	
Owner		(417) 849-2402		kyle@kirkscollsioncenter.com	
WATE P.O. E	R PROTECTIO	MENT OF NATURAL ON PROGRAM MO 65102-0176	RESOURCE	S	
MO 780-1632 (10-19)				Page 2 of 2	

SEWER EXTENSION DESIGN CERTIFICATION

Answer all questions yes, no, or N/A. Answer N/A only if the question is clearly not applicable to the design of the proposed sewer extension **OR** if a deviation was previously allowed by the Department in the approval of Standard specifications or Standard Detail Sheets.

9.0			1	1	1
	REGULATION		YES	NO	N/A
1	8.110(9)(B)	Are detailed plans showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities provided?	 Image: A start of the start of		
2	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	 		
3	8.110(3)(B)	Are average design flows, peak hourly flows, and I&I contributions for new systems calculated.	~		
4	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains, and combined wastewater?	 Image: A start of the start of		
5	8.120(3)(C)	Is ASTM C969-17 leakage test specified to ensure water tight joint seals and appropriate exfiltration and infiltration rates?			\checkmark
6	8.120(4)(A)	Are manholes located at all changes in grade, size or alignment, and all intersections?	 Image: A start of the start of		
7	8.120(3)(A)1	Are all sewer pipes constructed with a slope to obtain mean velocities of not less than 2 feet per second?	 Image: A start of the start of		
8	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	 Image: A start of the start of		
9	8.120(3)(A)	Is the pipe installation, embedment, and backfill designed to prevent damage to the pipe and its joints?	<		
10	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?	 Image: A start of the start of		
11	8.120(4)(C)	Are manholes at least 42 inches in diameter with a clear opening of 22 inches on sewer line larger than 8"?	~		
12	8.120(4)(C)	Where cleanouts are used at the end of a lateral instead of a manhole, are they a minimum diameter of 8 inches or larger and equal to the diameter for pipes < 8"?	 Image: A start of the start of		
13	8.120(4)(E)	Are the manholes specified to be watertight, constructed, installed in accordance with the manufacturer's recommendations and procedures?	 Image: A start of the start of		
14	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?	 Image: A start of the start of		
15	8.120(5)(B)	Are sewers and manholes located at least 50 feet horizontally from any existing or proposed water supply well, sources, structures?	 Image: A start of the start of		
16	8.120(5)(A)	Is the sewer free from physical connections to a potable water supply system with no water pipes coming in contact with a sewer manhole?	 Image: A start of the start of		

10.0	PRESSURE SE	WERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST			
	REGULATION		YES	NO	N/A
17	8.125(5)(A)1.	Does the cleaning velocity of ≥ 2 ft/s happen at least once per day?			\checkmark
18	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?			
19	8.125(5)B	Are appurtenances compatible with the piping system?			
20	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25 in.?			
21	8.125(5)(D)1. A	Do simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence – 1 grinder pump station.			
22	8.125(5)(D)1. B	Are multiple unit pump stations owned, operated, maintained by an approved continuing authority?			<
23	8.125(5)(D)3	Is there at least 70 gallons of storage in the grinder pump unit?			 Image: A start of the start of
24	8.125(5)(D)4	Do grinder pump stations have shutoff valves, check valves, and anti- siphon valves (where siphoning could occur) that are accessible from the ground surface?			~
25	8.125(5)(D)7 8.130(3)(B)2	Are units serviceable and replaceable under wet conditions without electrical hazard and electrical equipment suitable for hazardous locations (National Electrical Code, Class I, Group D, Division 1 location)?			~
26	8.125(5)(D)8 8.125(6)(F)6	Are provisions in place to avoid interruption of service due to mechanical or power failure by providing standby power, storage capacity or interconnection with another disposal system?			
27	8.125(6)(D) 8.180(2)	Does each EDU have at least one septic tank with a minimum of 1,000 gallon capacity with 20% of tank volume dedicated to freeboard and ventilation?			 Image: A start of the start of t
28	8.125(6)(F)	Are pump vaults designed with duplex pumps for STEP sewer systems with design flow of 1,500 gallons per day or greater?			 ✓
29	8.125(7)(A) 8.125(7)(C)	Is the minimum STEG sewerservice line at least 4" in diameter?			
11.0	PUMP STATION	I CHECKLIST	•		
	REGULATION		YES	NO	N/A
30	8.130(2)(A) 8.140(2)(B)	Is the pump station designed to withstand the 100-year flood?			 Image: A start of the start of
31	8.130(3)(A)	Is the dry well completely separate from the wet well and is a suitable and safe means of access provided to each?			<
32	8.130(3)(B)	If the design flow is 1,500 gpd or more, are at least 2 pumps or pneumatic ejectors provided?			\checkmark
33	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?			 Image: A start of the start of
34	8.130(3)(F) 8.140(8)(J)	Do wet and dry wells have separate ventilation systems?			 Image: A start of the start of
35	8.130(3)(G)	Does all potable water brought to the pump station comply with 8.140 (7) D?			Image: A start of the start
36	8.130(6)	Is an alarm system provided with uninterrupted power?			
37	8.130(7)(A)	Is there 2 hours retention of the peak hourly flow for a design flow > 100,000 gpd or 4 hrs retention of the peak hourly flow for a design flow < 100,000 gpd?			<
38	8.130(7)(B)	Is there an independent utility substation provided for emergency power that is capable of starting and operating the pump station at its rated capacity?			<
39	8.130(8)(A)	Is the force main velocity of ≥ 2 ft/s maintained?			
40	8.130	Are there complete operation instructions for the pumping stations provided that include emergency procedures, maintenance schedules, special tools and spare parts that may be necessary?			

12.0 SUCTION LIFT PUMP AND SUBMERSIBLE PUMP STATION CHECKLIST										
	REGULATION				·····	YES	NO	N/A		
41	8.130(4)	Are the suction lift pump	s of the self prin	ning or vacuum pri	ning type?					
42	8.130(4)(A)	Is the combined total of and required net positive less than or equal to twe			•					
43	8.130(4)(B)	Are there dual vacuum p lift pump?								
44	8.130(5)(A)	Are submersible pumps personel entering, or dis								
13.0	CERTIFICATIO	N STATEMENT		·····	·		-			
For a	including the possibility of fine and imprisonment. I hereby certify that this plan, specification, and/or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Missouri.									
Missouri Professional Engineer's Seal: Missouri Professional Engineer's Seal: NUMBER										
Stree	e: Jared M Davis at Address: 3213 ; Springfield	S. West Bypass S	tate: MO	ZIP Code:	65807					
Phor	ne Number: 417-8	66-2741	Email: jmdavi	s@weareown.com						